

APPLICATION # CL1-00505-1

STAFF ANALYSIS

FEASIBILITY:

Project Scope: The project renovation involves three distinct program areas, (1) four multi-use laboratories with a hESC analytic laboratory, (2) Good Tissue Practice (GTP) space, and (3) Shared Resource space. (Though the proposal mentions Good Manufacturing Practice (GMP) space, the applicant has confirmed that this area is not part of the Shared Research Laboratory and is included in the discussion to demonstrate proximity of the shared space to other important hESC resources at this institution and for consideration as part of the institutional commitment.) The drawings provided are block diagrams indicating the areas to be affected by the alteration. Our review determined that most of the work occurs within existing rooms, however, there are no detailed floor plans or layout of the proposed space to undergo renovation. The majority of work is in the analytic laboratory. The description of the work indicates that the configuration of the existing space is adaptable to the new program uses planned and thus obviates the need for major construction.

There is a narrative describing the work to be done. The work to be completed includes upgrading the ventilation system to provide appropriate air filtering capabilities to meet air quality standards for this type of space. Emergency power will be installed to serve 11 rooms so that critical equipment will operate in the event of a loss of power from the serving utility. Casework in 10 rooms and an existing a cold room will be upgraded. Special treatment includes installation of windowed walls and doors that will provide better visual supervision of space and installation of epoxy flooring in the GTP laboratory. Code related work includes work needed to provide appropriate access for the disabled. Utility work includes installation of a central CO₂ and Nitrogen piping system, data and voice communication lines and a security system.

A total of 4,646 asf is cited as the area involved in the project with 6,862 noted as the gross square footage involved. The difference between gross and assignable could not be determined from the information provided. A rough take-off from the drawings confirmed the assignable square footages provided.

Project Management: The proposal identifies the construction management processes that are in place at the institution with appropriate institutional management support.

COST:

A line item budget estimate is provided that identifies about 30 categories of work to substantiate the construction amount of \$1,217,987. Plumbing, HVAC and electrical work constitute about 43 percent of the cost of the project. This percentage is consistent

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with typical laboratory-intensive projects. Carpentry, laboratory casework, finishes (including walls and ceilings) and related work represent about 35 percent of the project. Code required work, including fire safety issues, access for the disabled constitute about seven percent of the budget while miscellaneous work, including tank storage, a video security system and data systems make up the remaining 15 percent. A modest amount (\$25,000) has been budgeted for institutional work on utility connections and door locks. The amount budgeted for design fees, administrative costs and project contingency represents about 20 percent of the construction amount which is within the RFA budget guidelines of 25 percent.

The overall cost per asf for the renovation work is \$316. To convert this to a comparable figure for gross square feet (gsf) in a typical research-intensive building, one would assume an overall building efficiency of assignable-to-gross area of 60 percent. Thus, the 4,646 asf would equate to 7,743 gsf considering the full complement of building space (e.g., the gross building area including circulation and support) constructed to support the area to be renovated. Using this calculated gross area, the cost per gsf would amount to \$189/gsf. This provides a more meaningful comparison to new laboratory building construction costs. We conclude that the average cost for new laboratory construction would be about \$600/gsf, excluding land and site utilities. This amount would vary widely within California, but is being used here as an indicator of new construction value for comparative purposes. Based on this comparison, the renovation work represents about 32 percent of the cost of new laboratory space. Based on typical capital budget guidelines, renovation costs should not exceed about 65 percent of new construction in order to be considered a reasonably good investment.

The applicant indicates that the shared laboratory would be able to accommodate the NIH-free laboratory space needs for 26 PI's based at this institution. Based on this number of PIs, the overall cost per PI is CIRM funding would be about \$56,000. Based on CIRM funding only (construction and equipment) the cost per institutional-based PIs is \$76,923.

The applicant has also committed to addressing any cost overrun issues.

TIMELINE:

The applicant began planning for the project in April 2007. Assuming an August 2007 award, the project schedule indicates that preliminary plans and working drawings will be completed by September 2007. Construction would begin in October with completion in March 2008. Occupancy would be seven months after award.

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INSTITUTIONAL COMMITMENT:

The applicant indicates that \$414,359 will be provided as institutional matching funds from prior related expenditures including a GMP core facility for the Shared Laboratory Renovation project. In addition, the applicant has committed \$321,726 for the Shared Research Lab project. This amount represents 42 percent of the construction grant funding request, and exceeds the minimum matching requirement of 20 percent of the grant amount.

While the applicant has shown sufficient matching funds from prior expenditures there is not sufficient institution to cover the total cost of this project.

HISTORICAL PERFORMANCE:

Data for three projects undertaken between 2003 and 2005 and ranging in cost from \$1.1 million to \$2.5 million indicate that actual project costs compared to budgets ranged from 5 percent below budget to 17 percent over budget. Actual completion of the projects was on time or within one month of the scheduled completion. The number of change orders noted ranged from a high of seven to one project that had no change orders. The applicant indicates that there six laboratory renovation projects ranging in cost from \$1 million to \$5 million that were undertaken at this institution within the last two years.

RESPONSIVENESS:

Shared Laboratory: The applicant indicates that there are 26 researchers based at the host institution and there are several potential shared laboratory users within the region. The type of space proposed is consistent with shared laboratory objectives.

Techniques Course: Funds were not requested for a Techniques Course.

Facilities Work Group Issues

- **Costs**--How will the FWG resolve the lack of sufficient institution funds required to cover the project costs? An additional \$145,000 is required as indicated in Section B.3 Budget Summary Table. .

The grant management office will need to confirm that all conditions of the grant as indicated in the Grants Administration Policy have been met. This would include confirming that all past work is consistent with grant requirements for prevailing wage and other construction-related requirements. This includes confirmation that equipment funds are budgeted pursuant the Grants Administration Policy as adopted December 7, 2006.